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#4

<110> Anderson, Marilyn, A., Lay, Fung T., Heath, Robyn, L.

<120> Plant-derived molecules and genetic sequences encoding same and uses therefor

<130> 18-01

<140> USSN 10/072,809
<141> 2002-02-08

<150> USSN 60/267,271
<151> 2001-02-08

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<170> PatentIn version 3.0

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20 25 30

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Asn Thr Phe Pro Gly Ile Cys Ile Thr Lys Pro Pro Cys Arg Lys Ala
35 40 45

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Lys Pro Pro Cys Arg Lys Ala Cys Ile Ser Glu Lys Phe Thr Asp Gly
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His Cys Ser Lys Ile Leu Arg Arg Cys Leu Cys Thr Lys Pro Cys Val
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            20                  25                  30

aac aca ttt cct gga ata tgc att acc aaa cca cca tgc aga aaa gct      144
Asn Thr Phe Pro Gly Ile Cys Ile Thr Lys Pro Pro Cys Arg Lys Ala
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Cys Ile Ser Glu Lys Phe Thr Asp Gly His Cys Ser Lys Leu Leu Arg
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Ser Gln Thr Phe Pro Gly Leu Cys Phe Met Asp Ser Ser Cys Arg Lys
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35 40 45

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35 40 45

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20 25 30

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35 40 45

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35 40 45

Cys Ile Lys Glu Lys Phe Thr Asp Gly His Cys Ser Lys Ile Leu Arg
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35 40 45

Ala Cys Leu Ser Glu Lys Phe Thr Asp Gly Lys Cys Ser Lys Ile Leu
50 55 60

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Pro Arg Ser Glu Glu Lys Lys Asn Asp Arg Ile Cys Thr Asn Cys Cys
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gca ggc acg aag ggt tgt aag tac ttc agt gat gat gga act ttt gtt 144
Ala Gly Thr Lys Gly Cys Lys Tyr Phe Ser Asp Asp Gly Thr Phe Val
35 40 45

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Cys Glu Gly Glu Ser Asp Pro Arg Asn Pro Lys Ala Cys Thr Leu Asn
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tgt gat cca aga att gcc tat gga gtt tgc ccg cgt tca gaa gaa aag 240
Cys Asp Pro Arg Ile Ala Tyr Gly Val Cys Pro Arg Ser Glu Glu Lys
65 70 75 80

aag aat gat cgg ata tgc acc aac tgt tgc gca ggc acg aag ggt tgt 288

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Lys Asn Asp Arg Ile Cys Thr Asn Cys Cys Ala Gly Thr Lys Gly Cys
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aag tac ttc agt gat gat gga act ttt gtt tgt gaa gga gag tct gat      336
Lys Tyr Phe Ser Asp Asp Gly Thr Phe Val Cys Glu Gly Glu Ser Asp
            100                 105                 110

cct aga aat cca aag gct tgt cct cgg aat tgc gat cca aga att gcc      384
Pro Arg Asn Pro Lys Ala Cys Pro Arg Asn Cys Asp Pro Arg Ile Ala
        115                 120                 125

tat ggg att tgc cca ctt gca gaa gaa aag aag aat gat cgg ata tgc      432
Tyr Gly Ile Cys Pro Leu Ala Glu Glu Lys Lys Asn Asp Arg Ile Cys
    130                 135                 140

acc aac tgt tgc gca ggc aaa aag ggt tgt aag tac ttt agt gat gat      480
Thr Asn Cys Cys Ala Gly Lys Lys Gly Cys Lys Tyr Phe Ser Asp Asp
145                 150                 155                 160

gga act ttt gtt tgt gaa gga gag tct gat cct aaa aat cca aag gcc      528
Gly Thr Phe Val Cys Glu Gly Glu Ser Asp Pro Lys Asn Pro Lys Ala
                165                 170                 175

tgt cct cgg aat tgt gat gga aga att gcc tat ggg att tgc cca ctt      576
Cys Pro Arg Asn Cys Asp Gly Arg Ile Ala Tyr Gly Ile Cys Pro Leu
            180                 185                 190

tca gaa gaa aag aag aat gat cgg ata tgc acc aac tgc tgc gca ggc      624
Ser Glu Glu Lys Lys Asn Asp Arg Ile Cys Thr Asn Cys Cys Ala Gly
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aaa aag ggt tgt aag tac ttt agt gat gat gga act ttt gtt tgt gaa      672
Lys Lys Gly Cys Lys Tyr Phe Ser Asp Asp Gly Thr Phe Val Cys Glu
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gga gag tct gat cct aaa aat cca aag gct tgt cct cgg aat tgt gat      720
Gly Glu Ser Asp Pro Lys Asn Pro Lys Ala Cys Pro Arg Asn Cys Asp
225                 230                 235                 240

gga aga att gcc tat ggg att tgc cca ctt tca gaa gaa aag aag aat      768
Gly Arg Ile Ala Tyr Gly Ile Cys Pro Leu Ser Glu Glu Lys Lys Asn
                245                 250                 255

gat cgg ata tgc aca aac tgt tgc gca ggc aaa aag ggc tgt aag tac      816
Asp Arg Ile Cys Thr Asn Cys Cys Ala Gly Lys Lys Gly Cys Lys Tyr
            260                 265                 270

ttt agt gat gat gga act ttt gtt tgt gaa gga gag tct gat cct aga      864
Phe Ser Asp Asp Gly Thr Phe Val Cys Glu Gly Glu Ser Asp Pro Arg
        275                 280                 285

aat cca aag gcc tgt cct cgg aat tgt gat gga aga att gcc tat gga      912
Asn Pro Lys Ala Cys Pro Arg Asn Cys Asp Gly Arg Ile Ala Tyr Gly
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att tgc cca ctt tca gaa gaa aag aag aat gat cgg ata tgc acc aat      960
Ile Cys Pro Leu Ser Glu Glu Lys Lys Asn Asp Arg Ile Cys Thr Asn
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tgt tgc gca ggc aag aag ggc tgt aag tac ttt agt gat gat gga act     1008
Cys Cys Ala Gly Lys Lys Gly Cys Lys Tyr Phe Ser Asp Asp Gly Thr
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ttt att tgt gaa gga gaa tct gaa tat gcc agc aaa gtg gat gaa tat     1056
Phe Ile Cys Glu Gly Glu Ser Glu Tyr Ala Ser Lys Val Asp Glu Tyr
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gtt ggt gaa gtg gag aat gat ctc cag aag tct aag gtt gct gtt tcc     1104
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Ala Gly Thr Lys Gly Cys Lys Tyr Phe Ser Asp Asp Gly Thr Phe Val
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Cys Glu Gly Glu Ser Asp Pro Arg Asn Pro Lys Ala Cys Thr Leu Asn
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Cys Asp Pro Arg Ile Ala Tyr Gly Val Cys Pro Arg Ser Glu Glu Lys
65                  70                  75                  80

Lys Asn Asp Arg Ile Cys Thr Asn Cys Cys Ala Gly Thr Lys Gly Cys
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Lys Tyr Phe Ser Asp Asp Gly Thr Phe Val Cys Glu Gly Glu Ser Asp
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Tyr Gly Ile Cys Pro Leu Ala Glu Glu Lys Lys Asn Asp Arg Ile Cys
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Ser Glu Glu Lys Lys Asn Asp Arg Ile Cys Thr Asn Cys Cys Ala Gly
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Lys Lys Gly Cys Lys Tyr Phe Ser Asp Asp Gly Thr Phe Val Cys Glu
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Asp Arg Ile Cys Thr Asn Cys Cys Ala Gly Lys Lys Gly Cys Lys Tyr
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Phe Ser Asp Asp Gly Thr Phe Val Cys Glu Gly Glu Ser Asp Pro Arg
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